

February 19, 2003

TO: Internal File

THRU: Karl R. Housekeeper, Team Lead

FROM: Gregg A. Galecki, Senior Environmental Specialist, Hydrology

RE: Modifications to Appendix 7-4 - Sedimentation and Drainage Control Plan ,
West Ridge Resources, Inc., West Ridge Mine, C/007/041 – AM03A-1, Carbon
County, Utah, Internal File

SUMMARY:

The following technical memo is a review of information submitted by West Ridge Resources, Inc. (Operator) to the Division of Oil, Gas, and Mining (Division) on February 18, 2003. This data is supplemental to data submitted on January 17, and January 28, 2003, to amend Appendix 7-4, the Sedimentation and Drainage Control Plan. The proposed modifications were submitted as a proposed abatement response to Notice of Violation (NOV) N02-49-2-1. NOV N02-49-2-1 was serviced November 19, 2002, by Inspector Karl R. Housekeeper in response to the Operator diverting mine-water through disturbed-area culverts and ditches, and storing mine-water in the Sedimentation pond. The current Utah Pollutant Discharge Elimination System (UPDES) permit indicates outfall number 001 is for discharge of the Sedimentation Pond that drains the disturbed area and associated facilities area. Outfall number 002 is for discharge of mine-water directly to the C Canyon drainage/Grassy Trail Creek. The review is solely from a hydrologic prospective and addresses only the hydrologic regulations pertinent to the amendment. The additional modifications made to the chapter 7 and appendix 7-4 of the currently approved Mining and Reclamation Plan (MRP), adequately address the minimum requirements of the regulations. Incorporation of this amendment into the MRP is recommended.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Spelling and pagination errors in Appendix 7-4 that were cited in the January submittal have been adequately addressed.

Findings:

Information in the proposal adequately address the requirements of the General Contents section of the regulations.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

The deficiencies cited in the January 17, 2003, submittal, were rectified with information submitted February 6, 2003. This information was part of an amendment to the M&RP that was approved in September 2002, but never submitted and officially incorporated into the Mine Plan. The exclusion of the information made a comprehensive review of the January 17, 2003 information very difficult. Primarily, all the tables and figures in Appendix 7-4 now reflect accurate 'as-built' information.

Findings:

Information in the proposal adequately addresses the requirements of the General Contents section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

During the mine permit midterm review, conducted during the fall season 2001, the Operator committed to installing a precipitation gauge that would monitor precipitation events and would be submitted on an annual basis. A precipitation gauge was installed on November 14, 2001. At the time of this analysis, the precipitation data for 2001 and 2002 has not been submitted however, it is anticipated this information will be included in the 2002 annual report.

Depending on how accurate the precipitation information has been documented, the Division reserves the request to require the submittal of more information. This becomes more important with the current proposed amendment because UDPES Discharge Point 001 will now be conveying mine-water discharge, in addition to the disturbed area runoff, as was originally designed. The additional information may include the use of 'Best Technology Currently Available' (BTCA) and request a total-weather station be installed to record data continuously (models are available in the \$300 - \$700 range).

Findings:

Information in the proposal adequately meets the minimum requirements of the Environmental Resource Information – Climatological Resource Information section of the regulations.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

TECHNICAL MEMO

Analysis:

Acid- and Toxic-Forming Materials and Underground Development Waste

The MRP (pg 7-28) indicates 'any emulsion fluid spill underground would go to an underground sump'. This information is still valid because the Operator indicates small sumps exist at the end of each Main. These sumps are adequate for containment of spills should any occur. The Operator has also made a commitment of when a larger underground sump-area will be developed on page 1a of Appendix 7-4. This information adequately addresses an earlier-cited deficiency.

Water-Quality Standards And Effluent Limitations

The submittal of the currently proposed amendment affects the routing/process of the two UPDES Discharge Points within the currently approved permit. The current UPDES permit (expires April 2003) maintains the same water quality standards / effluent limits at both discharge points, and the Operator commits to maintaining those standards within this amendment.

Sediment Control Measures

As an added Sediment Control Measure the current amendment has been proposed. Recent testing of the mine-water discharge indicates the water may not always meet effluent limitations. The current amendment proposes routing mine-water discharge through the Sedimentation Pond. This routing is outlined in Section 1e) of the Sedimentation and Drainage Control Plan - Appendix 7-4. The following modifications have been made to the amendment for compliance:

- Pumping of water will be limited to a maximum rate of 230 gpm. This is the maximum flow-rate the smallest ditch can handle while still maintaining capacity for the 10-year/24-hour storm event and maintain ½-foot freeboard. These commitments are made in the Introduction Section of Appendix 7-4 and numerous other areas of the appendix.
- Both Map 7-2 and text clearly indicate how mine-water is conveyed from the mine portal to the UPDES 002 discharge point and sedimentation cell A.
- Culverts DC-8AR will only be used to convey water in excess of the designed 10-year/24-hour storm event. This is outlined in Appendix 7-4 Introduction item 1f.
- The commitment of the ditches 'maintaining a 0.5-foot of freeboard at all times' is stated in numerous places and is supported by Appendix 7-4 Table 13.

This information adequately addresses earlier-cited deficiencies in this section.

Siltation Structures: Sedimentation Ponds

In Section R645-301-742 – Sediment Control Measures of the MRP (page 40), the Operator commits to monitoring sediment levels with a marker in the pond and removing sediment at the 60 % volume level. The Operator also commits to monitor the water level with a marker and removing water at the 100% sediment volume level, commonly referred to as the ‘dead storage’ of the sedimentation pond.

Discharge Structures

Appendix 7-4 Table 15 – Disturbed Culvert Design Summary, indicates culvert DC-12 is a 1.5-foot culvert with a flow capacity of 21.59 cfs. The only additional water diverted to culvert DC-12 from culverts DC-8AR will be in excess of the designed 10-year/24-hour storm event. Ditch DD-12 and culvert DC-12 can handle the additional flow.

Appendix 7-4 Section 3.1g) indicates mine-water will utilize only the “dead” or sediment storage volume (100 % marker) of the Sediment Pond cells, at which point it will be discharged into the C Canyon drainage according to the UPDES Discharge Permit. A similar statement addressing the pumping of mine-water is to be provided in Appendix 7-4 Section 1e). Both of these sections also provide an adequate description of how the cells of the Sedimentation pond will be used for mine-water.

Section R645-301-733.130 – Impoundments (pg 7-34) indicates Cell B of the Sedimentation Pond will be supplied with a steel-constructed walkway to access the UPDES Discharge Point 001 (Principle Spillway – 36” C.M.P. culvert riser and oil skimmer). With the increased likelihood that both Cell A and Cell B of the Sedimentation Pond will be retaining water in the future, the Operator has committed to installing the walkway this spring once suitable weather exists.

Findings:

Information in the proposal adequately meets the minimum requirements of the Operation Plan – Hydrologic Information section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

TECHNICAL MEMO

Analysis:

Mining Facilities Maps

Map 7-2, Mine Site Drainage map, submitted January 28, 2003, and re-submitted February 10 with additional modifications. The map now clearly illustrates the location of UPDES discharge point 002 (mine-water discharge directly into the C Canyon drainage), and how mine-water is conveyed from the mine portal to Sedimentation Pond Cell A.

Also on Map 7-2, an area outlined with a copper-colored line, and extending up from the property gate, has been modified to illustrate the areas included in ASCA-W. These items adequately address previously cited deficiencies in this section.

Findings:

Information in the proposal adequately addresses the requirements of the Operation Plan – Maps, Plans, and Cross Sections of Mining Operations section of the regulations.

RECOMMENDATIONS:

. The additional modifications made to the chapter 7 and appendix 7-4 of the currently approved Mining and Reclamation Plan (MRP), adequately address the minimum requirements of the regulations. Incorporation of this amendment into the MRP is recommended.